

APPLICATION

FOR

UNITED STATES LETTERS PATENT

TO ALL WHOM IT MAY CONCERN;

BE IT KNOWN THAT I, **GARY T. ROE** and **LINDA S. ROE**, citizens of
the United States, have invented new and useful improvements in a

PORTABLE BEVERAGE HOLDER APPARATUS

of which the following is a specification:

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PORTABLE BEVERAGE HOLDER APPARATUS

BACKGROUND OF THE INVENTION

Cross-Reference to Related Application

This application claims priority based upon my copending Provisional Application Serial No. 60/437,934; filed January 6, 2003.

Field of the Invention

The present invention relates generally to beverage containers and, more particularly, to beverage containers especially adapted for suspension from the side rail of a boat.

10 Description of the Prior Art

In general, portable beverage holders are well known in the art. In this respect, throughout the years, a number of innovations have been developed relating to portable beverage holders, and the following U. S. patents are representative of some of those innovations: 3,734,439, 3,761,044, 4,131,259, 4,943,025, and 5,007,612.

More specifically, U. S. Patent Nos. 3,734,439 and 5,007,612 disclose beverage holders that are clamped onto support structures. With both of these patents, the orientation of the beverage holder with respect to the support structures are fixed so that the beverage is supported in a vertical orientation.

The respective orientations can be adjusted, but once they are adjusted, the adjusted orientations are fixed. U. S. Patent No. 5,007,612 is specifically designed to be clamped onto a boat handrail. In maritime applications, a boat often rocks on the water. When such rocking occurs, with the fixed orientation beverage supports just described, the beverage can move out from its vertical orientation. As a result, the beverage can easily spill. In this respect, to accommodate to the rocking of a boat, it would be desirable if a portable beverage holder apparatus were provided which enables a beverage to stay in a vertical orientation when the boat rocks.

10 U. S. Patent No. 3,761,044 discloses a drink caddy that is suspended from a boat lifeline. The structures of the caddy permit the beverage to remain in a vertical orientation when the boat rocks. The boat lifeline is cylindrical in shape, and the structures of the drink caddy which attach to the lifeline have a complementary cylindrical shape. The side rail of a boat is generally planar shaped, and the device in this patent would not readily attach to the side rail of a boat. In this respect, it would be desirable if a portable beverage holder apparatus were provided which easily attaches to the planar side rail of a boat.

20 U. S. Patent No. 4,131,259 discloses a swinging cup holder that is supported by a mounting bracket that is screwed into a vertically oriented support. With the mounting bracket being screwed into a vertically oriented support, the swinging cup holder is not conveniently portable. To remove the mounting bracket from the vertically oriented support, a screwdriver must be

obtained, and the screw must be unscrewed. Moreover, the screw can readily become lost once it is removed from the vertically oriented support. The need to unscrew the mounting bracket impedes the portability of the swinging cup holder. However, in contrast, it would be desirable for a portable beverage holder apparatus to be readily portable. In this respect, it would be desirable to provide a portable beverage holder apparatus which is readily portable.

U. S. Patent No. 4,943,025 discloses a cup holder which allows for a beverage can readily swing from a vehicle mirror. This cup holder includes a triangular hook for suspending the device from the vehicle mirror. In addition,
10 the cup holder is suspended by a short length of chain. The triangular hook does not provide a firm fixation of the device to its support. Moreover, the length of chain permits a beverage to swing back and forth like a pendulum from vertical to non-vertical orientations in substantially a 360 degree pattern. In view of the above, it would be desirable if a portable beverage holder apparatus were provided which firmly clamps onto a support member with a hand-operated clamp. Moreover, it would be desirable if a portable beverage holder apparatus were provided which does not permit a suspended beverage from swinging around in a 360 degree pattern.

Thus, while the foregoing body of prior art indicates it to be well known
20 to use beverage holders, the prior art described above does not teach or suggest a portable beverage holder apparatus which has the following combination of desirable features: (1) enables a beverage to stay in a vertical orientation when

a boat rocks; (2) easily attaches to the planar side rail of a boat; (3) is readily portable and can be readily moved and quickly attached to different supports; (4) firmly clamps onto a support member with a hand-operated clamp; and (5) does not permit a suspended beverage from swinging around in a 360 degree pattern. The foregoing desired characteristics are provided by the unique portable beverage holder apparatus of the present invention as will be made apparent from the following description thereof. Other advantages of the present invention over the prior art also will be rendered evident.

SUMMARY OF THE INVENTION

To achieve the foregoing and other advantages, the present invention, briefly described, provides a portable beverage holder apparatus which includes clamping means, a hanger member, clamp-to-hanger hinge means connected between the clamping means and the hanger member, a cup unit, and hanger-to-cup hinge means connected between the hanger member and the cup unit. When clamped onto a boat side rail, the portable beverage holder apparatus permits a beverage can to be carried by the cup unit and permits the beverage can to remain substantially vertically orientated even when the boat undergoes a rocking motion.

Preferably, the clamping means include a spring clamp assembly. Preferably, the spring clamp assembly includes grasping portions, clamping portions, and a spring for urging the clamping portions towards each other.

Preferably, the clamp-to-hanger hinge means include a clamp-to-hanger hinge assembly. Preferably, the clamp-to-hanger hinge assembly includes a top hanger reception channel in the clamp assembly, and a top hanger portion in the hanger member. The top hanger portion is received in the top hanger reception channel.

Preferably, the hanger-to-cup hinge means include a hanger-to-cup hinge assembly. Preferably, the hanger-to-cup hinge assembly includes hanger, free-

end portions, on the hanger member and hanger-reception channels in the cup unit. The hanger, free-end portions are received in the hanger-reception channels.

The hanger-to-cup hinge means can further include outside washers between outside portions of the hanger, free-end portions and the cup unit, and can further include inside washers between inside portions of the hanger, free-end portions and the cup unit.

10 The above brief description sets forth rather broadly the more important features of the present invention in order that the detailed description thereof that follows may be better understood, and in order that the present contributions to the art may be better appreciated. There are, of course, additional features of the invention that will be described hereinafter and which will be for the subject matter of the claims appended hereto.

In this respect, before explaining a preferred embodiment of the invention in detail, it is understood that the invention is not limited in its application to the details of the construction and to the arrangements of the components set forth in the following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood, that the phraseology and
20 terminology employed herein are for the purpose of description and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which disclosure is based, may readily be utilized as a basis for designing other structures, methods, and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

It is therefore an object of the present invention to provide a new and improved portable beverage holder apparatus which has all of the advantages of the prior art and none of the disadvantages.

10 It is another object of the present invention to provide a new and improved portable beverage holder apparatus which may be easily and efficiently manufactured and marketed.

It is a further object of the present invention to provide a new and improved portable beverage holder apparatus which is of durable and reliable construction.

 An even further object of the present invention is to provide a new and improved portable beverage holder apparatus which is susceptible of a low cost of manufacture with regard to both materials and labor, and which accordingly is then susceptible of low prices of sale to the consuming public, thereby
20 making such portable beverage holder apparatus available to the buying public.

Still yet a further object of the present invention is to provide a new and improved portable beverage holder apparatus which enables a beverage to stay in a vertical orientation when a boat rocks.

Still another object of the present invention is to provide a new and improved portable beverage holder apparatus that easily attaches to the planar side rail of a boat.

Yet another object of the present invention is to provide a new and improved portable beverage holder apparatus which is readily portable and can be readily moved and quickly attached to different supports.

10 Even another object of the present invention is to provide a new and improved portable beverage holder apparatus that firmly clamps onto a support member with a hand-operated clamp.

Still a further object of the present invention is to provide a new and improved portable beverage holder apparatus which does not permit a suspended beverage from swinging around in a 360 degree pattern.

These together with still other objects of the invention, along with the various features of novelty which characterize the invention, are pointed out with particularity in the claims annexed to and forming a part of this disclosure. For a better understanding of the invention, its operating advantages and the

specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and the above objects as well as objects other than those set forth above will become more apparent after a study of the following detailed description thereof. Such description makes reference to the annexed drawing wherein:

Figure 1 is a side view showing a preferred embodiment of the portable beverage holder apparatus of the invention attached to a boat side rail.

Figure 2 is a front view of the embodiment of the portable beverage holder apparatus shown in Figure 1 taken along line 2-2 of Figure 1.

10 Figure 3 is a cross-sectional view of the embodiment of the portable beverage holder apparatus of Figure 2 taken along line 3-3 thereof.

Figure 4 is a side view of the embodiment of the invention shown in Figure 1, wherein different positions of the apparatus are shown as a boat and its side rail are rocking.

Figure 5 is an exploded perspective view of the embodiment of the invention shown in Figures 1-4.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the drawings, a new and improved portable beverage holder apparatus embodying the principles and concepts of the present invention will be described.

Turning to Figures 1-5, there is shown a preferred embodiment of the portable beverage holder apparatus of the invention generally designated by reference numeral 10. In the preferred embodiment, portable beverage holder apparatus 10 includes clamping means, a hanger member 16, clamp-to-hanger hinge means connected between the clamping means and the hanger member 16. 10 a cup unit 20, and hanger-to-cup hinge means connected between the hanger member 16 and the cup unit 20. When clamped onto a boat side rail 11, the portable beverage holder apparatus 10 permits a beverage can 13 to be carried by the cup unit and permits the beverage can to remain substantially vertically orientated even when the boat undergoes a rocking motion.

Preferably, the clamping means include a spring clamp assembly 12. Preferably, the spring clamp assembly 12 includes grasping portions 34, clamping portions 36, and a spring 38 for urging the clamping portions 36 towards each other.

Preferably, the clamp-to-hanger hinge means include a clamp-to-hanger 20 hinge assembly 14. Preferably, the clamp-to-hanger hinge assembly 14 includes

a top hanger reception channel 32 in the clamp assembly 12, and a top hanger portion 30 in the hanger member 16. The top hanger portion 30 is received in the top hanger reception channel 32.

Preferably, the hanger-to-cup hinge means include a hanger-to-cup hinge assembly 18. Preferably, the hanger-to-cup hinge assembly 18 includes hanger, free-end portions 22, on the hanger member 16 and hanger-reception channels 24 in the cup unit 20. The hanger, free-end portions 22 are received in the hanger-reception channels 24.

10 The hanger-to-cup hinge means can further include outside washers 26 between outside portions of the hanger, free-end portions 22 and the cup unit 20, and can further include inside washers 28 between inside portions of the hanger, free-end portions 22 and the cup unit 20.

To use the portable beverage holder apparatus 10 of the invention, the spring clamp assembly 12 is clamped onto a structure, such as the boat side rail 11 Figures 1 and 4. This is done by a person grasping the spring clamp assembly 12 between one's fingers and squeezing the grasping portions 34 together. As a result, the clamping portions 36 are spread apart. When spread apart, the clamping portions 36 are positioned to straddle the boat side rail 11, and the grasping portions 34 are released, whereby the clamping portions 36
20 clamp onto the boat side rail 11 as urged by the force of the spring 38.

Aside from the boat side rail 11, generally, the portable beverage holder apparatus of the invention can be clamped onto any convenient structure, such as a shelf. A cabinet. A ledge, etc. in any convenient location such as in a basement, garage, or camper.

Once the spring clamp assembly 12 is clamped onto the respective structure, the hanger member 16 and the cup unit 20 are free to swing around the clamp-to-hanger hinge assembly 14. Preferably, there is a clamp-to-hanger hinge assembly 14 on each side of the spring clamp assembly 12.

10 In addition, the cup unit 20 is free to swing around the hanger-to-cup hinge assemblies 18, which are located on diametrical opposite sides of the cup unit 20. The cup unit 20 can be swung partially around the hanger-to-cup hinge assemblies 18 to permit ready insertion of a beverage can 13 into the cup unit 20.

Once the beverage can 13 is inserted into the cup unit 20, the beverage can 13 and the cup unit 20 will tend to remain oriented in a vertical orientation even when the boat rocks and causes the hanger member 16 to swing at various orientations with respect to the spring clamp assembly 12 as shown in Figure 4. In this respect, the portable beverage holder apparatus 10 can hold a can or bottle in an unstable environment, such as a boat.

Further with respect to fishing from a boat, conventionally, when people drift fish, they stand along the boat side rail 11 with their lines in the water. When the boat moves to make another drift, they reel in their lines and dash over to their coolers to eat their food and drink their beverages because there is no convenient place to put their drinks. In sharp contrast, however, when using a portable beverage holder apparatus 10 of the invention. A fisherman can have one's beverage right next to one, at one's convenience, without has to drink the entire beverage so as to avoid setting down a partially consumed beverage on a rocking boat, and without worrying about the beverage falling off of the boat side rail 11. Moreover, frictional contact between members that are swinging relative to one another provide a damping force to impede a swinging pendulum action of the portable beverage holder apparatus.

In addition, the portable beverage holder apparatus of the invention provides for a one-handed placement of the apparatus on a boat side rail 11 and a one-handed removal of a beverage container from the apparatus, letting the apparatus and beverage swing to the rocking of the boat. The other hand can be used for holding a fishing rod.

The components of the portable beverage holder apparatus of the invention can be made from inexpensive and durable metal and plastic materials.

As to the manner of usage and operation of the instant invention, the same is apparent from the above disclosure, and accordingly, no further discussion relative to the manner of usage and operation need be provided.

It is apparent from the above that the present invention accomplishes all of the objects set forth by providing a new and improved portable beverage holder apparatus that is low in cost, relatively simple in design and operation, and which may advantageously be used to enable a beverage to stay in a vertical orientation when a boat rocks. With the invention, a portable beverage holder apparatus is provided which easily attaches to the planar side rail of a boat.

10 With the invention, a portable beverage holder apparatus is provided which is readily portable and can be readily moved and quickly attached to different supports. With the invention, a portable beverage holder apparatus is provided which firmly clamps onto a support member with a hand-operated clamp. With the invention, a portable beverage holder apparatus is provided which does not permit a suspended beverage from swinging around in a degree pattern.

Thus, while the present invention has been shown in the drawings and fully described above with particularity and detail in connection with what is presently deemed to be the most practical and preferred embodiment(s) of the invention, it will be apparent to those of ordinary skill in the art that many
20 modifications thereof may be made without departing from the principles and concepts set forth herein, including, but not limited to, variations in size, materials, shape, form, function and manner of operation, assembly and use.

Hence, the proper scope of the present invention should be determined only by the broadest interpretation of the appended claims so as to encompass all such modifications as well as all relationships equivalent to those illustrated in the drawings and described in the specification.

Finally, it will be appreciated that the purpose of the annexed **Abstract** is to enable the U. S. Patent and Trademark Office and the public generally, and especially the scientists, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application. Accordingly, the **Abstract** is neither intended to define the invention or the application, which only is measured by the claims, nor is it intended to be limiting as to the scope of the invention in any way.

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